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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,569	04/15/2004	Cor F. van Egmond	2004B025	9135

23455 7590 06/04/2007
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EXAMINER	
JOHNSON, EDWARD M	
ART UNIT	**PAPER NUMBER**
1754	

MAIL DATE	DELIVERY MODE
06/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,569	VAN EGMOND ET AL.	
	Examiner	Art Unit	
	Edward M. Johnson	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughn et al. US 6,403,855 in view of Williamson '077.

Regarding claim 1, Vaughn '415 discloses a process for regenerating a catalyst comprising contacting the catalyst with an oxygenate to form an olefin comprising ethylene and/or propylene (see column 2, lines 39-44 and column 3, lines 22-24), sending the coked catalyst to a regenerator (see column 17, lines 7-10), for oxidation in an oxygen atmosphere (see column 14, lines 1-6), and re-circulation (see column 17, lines 7-10).

Vaughn fails to disclose separating air into an oxygen-containing stream and a nitrogen-containing stream.

Williamson '077 discloses separating air into an oxygen-containing stream and a nitrogen-containing stream (see column 12, lines 26-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Williamson's air separation unit to separate air into oxygen-containing and nitrogen-containing streams in the catalyst regenerating process of Vaughn because Williamson discloses the air separation step in a process for regenerating catalyst (title, abstract), wherein to produce oxygen-enriched and nitrogen-enriched streams that can be used in different treatment steps of the regeneration zone (column 12, lines 30-33), and Vaughn discloses contacting with air to add strength to the catalyst (see column 10, lines 49-60).

Regarding claims 2-3, it would have been obvious to one of ordinary skill in the art to use air from the atmosphere, which would be at room temperature or about 27 degrees C because Vaughn discloses contacting with air to add strength to the catalyst (see column 10, lines 49-60). Further, apparatus limitations are not given undue weight in process claims. And, in any case, Vaughn '415 discloses heating (see column 8, lines 19-21), which would motivate an ordinary artisan to use a heat exchanger apparatus including a turboexpander and/or a cold box,

which would suggest a cryogenic unit as the disclosed prior art cold box.

Regarding claims 4-8 and 30-31, it would have been obvious to an ordinary artisan to use streams comprising compressed oxygen and nitrogen because an ordinary artisan would use pressure to move the air into the disclosed regeneration unit and air comprises both oxygen and nitrogen in a ratio of about 0.27 oxygen:nitrogen.

Regarding claims 9-10 and 29, Vaughn '415 discloses a fluidized catalyst bed (see column 11, lines 30-35).

Regarding claims 11 and 24-26, Vaughn '415 discloses polymerization to polyolefins (see column 14, lines 31-67).

Regarding claim 12, Vaughn '415 discloses hydrogen as a structure directing or affecting agent, which would motivate an ordinary artisan to hydrogenate with the disclosed hydrogen to affect the product structure, as disclosed.

Regarding claims 13-20, Vaughn '415 discloses sending the coked catalyst to a regenerator (see column 17, lines 7-10), for oxidation in an oxygen atmosphere (see column 14, lines 1-6), re-circulation (see column 17, lines 7-10), heating (see column 8, lines 19-21), and it would have been within the purview of an ordinary artisan to use an apparatus comprising a valve with

which to control the disclosed oxygen atmosphere for regeneration.

Regarding claims 21-23, Vaughn '415 discloses conversion of methanol (see column 14, lines 7-21), which would motivate an ordinary artisan to obtain methanol through any means, including syngas and natural gas, which contains hydrogen sulfide and water.

Regarding claims 27-28, apparatus limitations are not given undue weight in process claims. And, in any case, Vaughn '415 discloses heating (see column 8, lines 19-21), which would motivate an ordinary artisan to use a heat exchanger apparatus including a turboexpander and/or a cold box, which would suggest a cryogenic unit.

Response to Arguments

3. Applicant's arguments filed 2/20/07 have been fully considered but they are not persuasive.

It is argued that for instance, the Examiner has interpreted… into the system. This is not persuasive because Applicant does not claim separating components "from each other." It is noted that the features upon which applicant relies (i.e., separating components "from each other" rather than simple separation) are not recited in the rejected claim(s). Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is argued that for instance, Applicants concede… an obvious source. This is not persuasive because Applicant appears to admit that separation of air is disclosed in the cited prior art, arguing only that it would not have been an "obvious source". However, the Examiner's position is that it would have been an obvious source because Williamson discloses the air separation step in a process for regenerating catalyst (title, abstract), wherein to produce oxygen-enriched and nitrogen-enriched streams that can be used in different treatment steps of the regeneration zone (column 12, lines 30-33), and Vaughn discloses contacting with air to add strength to the catalyst (see column 10, lines 49-60).

It is argued that additionally, because Williamson… effluent stream (claim 31). This is not persuasive because Applicant merely points out the differences in the two combined references, which is an inherent feature of virtually any combination of more than one reference. However, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re*

Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It is argued that further, the Examiner does not acknowledge… cited prior art. This is not persuasive because Applicant appears to admit that methanol, an oxygenate, is disclosed and, even if it weren't at all disclosed, methanol is one of the simplest oxygenates, since it has only one carbon atom. In this case, methanol is actually disclosed and used in the reference, albeit in a slightly different context, as Applicant correctly alleges.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval

(PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edward M. Johnson
Primary Examiner
Art Unit 1754

EMJ